

#### (19) World Intellectual Property **Organization** International Bureau



(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/034898 A3

- (51) International Patent Classification7: A61B 5/00, 5/026
- (21) International Application Number:

PCT/IB2003/004354

- (22) International Filing Date: 2 October 2003 (02.10.2003)
- (25) Filing Language:

**English** 

(26) Publication Language:

**English** 

(30) Priority Data:

102 47 984.4

15 October 2002 (15.10.2002)

- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (71) Applicant (for all designated States except DE, US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): NEUMANN, Rolf [DE/DE]; c/o Philips Intellectual Property & Standards

GmbH, Weisshausstr. 2, 52066 Aachen (DE). BINDSZUS, Andreas [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

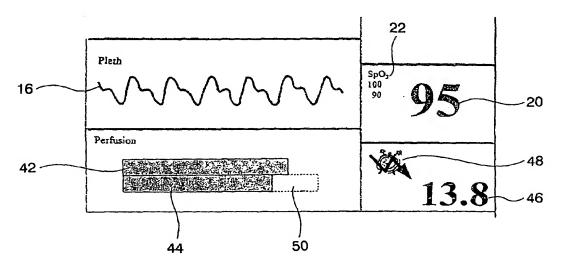
- (74) Agent: VOLMER, Georg; Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

[Continued on next page]

(54) Title: METHOD FOR THE PRESENTATION OF INFORMATION CONCERNING VARIATIONS OF THE PERFUSION



(57) Abstract: A method for the presentation of information concerning variations of the arterial filling with blood (perfusion) of organs of living beings on the user surface (10) of a display screen, in which method the data required for the presentation (perfusion index) is derived, using an algorithm, from measuring values of a non-invasive photometric measuring process for determining the arterial oxygen saturation of the blood. The invention is characterized in that a first perfusion index is defined as a reference value and the subsequent perfusion inbdices are determined as relative deviations with respect to the reference value, said relative deviations being presented in the form of analog, graphic elements (42, 44) on the user surface (10) as information concerning the 10 variations of the perfusion.



# WO 2004/034898 A3



- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
- (88) Date of publication of the international search report: 15 July 2004



Fax: (+31-70) 340-3016

INTERNATIONAL SEARCH REPORT PCT/IB 03/04354 A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61B5/00 A61B5/026 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the International search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Х CH 559 034 A (STEPHENS FREDERICK RICHARD 1-15 NEA) 28 February 1975 (1975-02-28) column 1, line 51 - column 2, line 48 column 4, lines 10-37 column 5, line 43 - column 6, line 5 EP 0 261 787 A (PHYSIO CONTROL CORP) Α 5,13-15 30 March 1988 (1988-03-30) page 5, lines 31-42 page 15, lines 24-42; figure 17 EP 0 194 105 A (BOC GROUP INC) Α 9,10 10 September 1986 (1986-09-10) page 1, lines 14-24 page 12, line 17 - page 13, line 10; figure 8 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. document referring to an oral disclosure, use, exhibition or "P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 0 5. 05. 04 19 January 2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,

Pohjamo, T



PCT/IB 03/04354

| Category ° | tion) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with Indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A          | EP 0 807 402 A (OHMEDA INC) 19 November 1997 (1997-11-19) page 9, lines 28-49; figure 6                                       | 1-15                  |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |
|            |   |                       |

### INTERNATIONAL SEARCH REPORT

PCT/IB 03/04354

| Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)  |
|--|
| This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:   |
| Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  |
| Claims Nos.:     because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically: |
| 3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).  |
| Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)  |
| This International Searching Authority found multiple inventions in this International application, as follows:  |
| see additional sheet   |
| As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.   |
| 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.  |
| As only some of the required additional search fees were timely pald by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:                           |
| 4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:            |
| 1-15   |
| Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.  |

International Application No. PCT/ IB 03/04354

# FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15

determining and presenting perfusion indeces, using a reference perfusion index

2. claims: 16-21

determining and presenting the quality of the measuring values



PCT/IB 03/04354

| Patent document cited in search report |         |     | Publication date |  | Patent family<br>member(s)  | Publication<br>date  |
|--|---------|-----|------------------|--|---|--|
| <b>√</b> CH                            | 559034  | ) A | 28-02-1975       | СН   | 559034 A5   | 28-02-1975   |
| ✓EP                                    | 0261787 | ) A | 30-03-1988       | US<br>AU<br>CA<br>EP<br>JP<br>WO             | 4869253 A<br>7716787 A<br>1304503 C<br>0261787 A1<br>1500494 T<br>8801149 A1  | 26-09-1989<br>25-02-1988<br>30-06-1992<br>30-03-1988<br>23-02-1989<br>25-02-1988   |
| ∠EP                                    | 0194105 | A   | 10-09-1986       | AU<br>AU<br>AU<br>DE<br>EP<br>JP<br>JP<br>JP | 603461 B2<br>1856288 A<br>571369 B2<br>5365586 A<br>3678980 D1<br>0194105 A2<br>1829560 C<br>4017051 B<br>61276541 A<br>8601179 A | 15-11-1990<br>06-10-1988<br>14-04-1988<br>04-09-1986<br>06-06-1991<br>10-09-1986<br>15-03-1994<br>25-03-1992<br>06-12-1986<br>30-12-1986 |
| νĒΡ                                    | 0807402 | A   | 19-11-1997       | US<br>CA<br>EP<br>JP<br>JP<br>JP             | 5766127 A<br>2201577 A1<br>0807402 A1<br>10052408 A<br>3350521 B2<br>2001178709 A   | 16-06-1998<br>15-10-1997<br>19-11-1997<br>24-02-1998<br>25-11-2002<br>03-07-2001   |

This Page Blank (uspto)